

PRITUL, Yu. A.; GRIGOR'YEV, V. M.; MANDEL'BAUM, M. M.; MIKUTSKIY, S. P.;
MOKSHANTSEV, K. E.; SOKOLOV, D. S.

"Oil and gas deposits of the Siberian Platform."

report submitted for 22nd Sess, Intl Geological Cong, New Delhi, 14-22 Dec
1964.

SOKOLOV, D. V.

SOKOLOV, D. V. (Professor) ^{TIC} Diagnositc value of the method of thick blood dropped on stained filtrate paper.

To: Veterinariya; 24; 10; October 1947; Uncl.
TABCON

IL'IN, Yerofey Vasil'yevich; SOKOLOV, D.V., nauchn. red.
ZHURAVLEV, S.A., red.

[Installation of storage batteries and charging devices]
Nontazh akkumuliatornykh baterii i zariadnykh ustroistv.
Moskva, Stroiizdat, 1964. 113 p. (MLIA 17:6)

SOKOLOV, D. V.

ROMANOV, V. S. Montazh raspredelitel'nogo ustroystva elektricheskikh stantsiy i podstantsiy. Moscow, 1944. 354p.

A textbook for advanced trade and railroad schools giving information on distributing equipment of electric power stations and substations, repair and maintenance of equipment, installation of electric equipment, grounding, and the organization of electrical installation work; published by State Electric Power Publishing House.

SOKOLOV, D. V.

Installation of heavy duty insulated conductors in industrial establishments.
Moskva, Gos. energ. izd-vo, 1947. 75 p. (49-52289)

TK3211.S6

SOKOLOV, D.V.

SMIRNOV, A.D., redaktor; SOLOV'YEV, P.F., redaktor; SOKOLOV, D.V., redaktor.

[Electrician's handbook] Spravochnik elektricmontera. Pod obshchel
redaktsiei A.D.Smirnova i P.F. Solov'yeva. Moskva, Gosudarstvennoe
energeticheskoe izd-vo, 1950-. v.2. [Wiring and electric illumina-
tion equipment] Provodki i osvetitel'nye elektroustanovki. v. 3 [Instal-
lation of substation distribution systems of up to 35 kilovolts] Mon-
tazh raspredelitel'nykh ustroistv podstantsii do 35 kV.
(Electric lighting) (Electric substations) (MIRA 8:3)

SOYOLOV, D.V.

Montazh elektrooborudovaniia transformatornykh podstantsii promyslennyykh predpriiatii (Assembling of electric equipment of transformer sub-stations of industrial enterprises).
Moskva, Gos. izd-vo lit-ry po stroit. arkhit., 1952. 175 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 1, April 1953

LEVI, S.S.; SOKOLOV, D.V., redaktor; KRASIL'SHCHIK, S.I., redaktor;
TOKER, A.M., tekhnicheskiy redaktor

[Booklet on safety measures in work with electric tools] Pamiatka po
tekhnike bezopasnosti pri rabote elektroinstrumentami. 2. izd. Mo-
skva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 28 p.
(MIRA 7:8)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva. Otdel
tekhniki bezopasnosti i promyshlennoy sanitarii.
(Power tools--Safety measures)

SOKOLOV, D. V.

LEBEDEV, N.N., inzhener, redaktor; VINOGRADOV, K.V., inzhener, redaktor;
LEVVI, S.S. inzhener, redaktor; ROZANOV, M.S., inzhener, redaktor;
SIMAKOV, S.N., inzhener, redaktor; SOKOLOV, D.V., inzhener,
redaktor; NIKOLAYEV, L.A., redaktor; DAKHNOV, V.S., tekhnicheskiy
redaktor.

[Power engineering handbook for construction work] Spravochnik
energetika na stroitel'stve. Moskva, Gos. izd-vo lit-ry po
stroitel'stvu i arkhitekture, 1954. 915 p. (MLRA 7:12)
(Power engineering)

AHROMCHENKO, Grigoriy Yefimovich; SOKOLOV, D.V., inzhener, redaktor;
BEGAK, B.A., redaktor; TOKER, A.M., tekhnicheskiy redaktor.

[High-voltage switchgear; construction and assemblage] Vysoko-
vol'tnaia vykliuchaiushchaya apparatura; konstruktsii i montazh.
Moskva, Gos.izd-vo lit-ry po stroitel'stvu i arkhitekture, 1955.
222 p.
(Electric switchgear)

(MLRA 9:1)

SOKOLOV, D. V.

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Elektromontazhnyye raboty (Electrical assembling work, by) V. V.
Markelov i D. V. Sokolov. M_oskva, Gos. Izd-vo Literatury Po Stroitel'stvu
i Arkhitektura, 1955.
330 p. illus., diagrs., tables.

MALINA,F.N.

Handbook of the power engineer in construction work. D.V.Sokolov.
Reviewed by F.N.Malina. Energetik'3 no.8:39-40 Ag '55. [REDACTED]
(MLRA 8:10)
(Power engineering) (Sokolov,D.V.)

SOKOLOV

PILYAVSKIY, A.T.; SOKOLOV, D.V., inzhener, nauchnyy redaktor; PROSTOSER-
DOV, A.P., redaktor izdatel'stva; BOROVNEV, N.K., tekhnicheskiy
redaktor; MEL'NICHENKO, F.P., tekhnicheskiy redaktor

[Safety instructions for movable electric power plant operators]
Pamiatka po tekhnike bezopasnosti dlia mashinista peredvizhnoi
elektrostantsii. Moskva, Gos. izd-vo lit-ry po stroit. i arkhit.
1956. 15 p. (MIR 10:4)
(Electric engineering--Safety measures)

MARKOV, Vasilii Vasil'yevich; SOKOLOV, D.V., inzhener, nauchnyy redaktor;
TYAPKIN, B.G., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy
redaktor

[Installation of electric power and lighting equipment] Montazh
silovogo i osvetitel'nogo elektrooborudovaniia. Izd. 2-oe, ispr.
Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 133 p.
(Electric engineering) (MLRA 9:9)

LEVI, Semen Savel'yevich, kandidat tekhnicheskikh nauk; SOKOLOV, D.V., inzhener, nauchnyy redaktor; UDOD, V.Ya., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Power supply for construction work] Energosnabzhenie stroitel'stva. Moskva, Gos. izd-vo lit-ry po stroy. i arkhitekture, 1956. 243 p.
(Electric power) (Building) (MLRA 10:1)

PHASE I BOOK EXPLOITATION

948

Sokolov, D. V., Engineer

Vtorichnaya kommutatsiya v raspredelitel'nykh ustroystvakh (Secondary
Switching in Distributing Systems) Moscow, Gosstroyizdat, 1958.
160 p. 15,000 copies printed.

Scientific Ed.: Frenkel', S.N., Engineer; Ed. of Publishing House:
Fakhomova, M.A.; Tech. Ed.: Solntseva, L.M.

PURPOSE: The monograph is intended for electricians working with
switching systems. It is recommended by the Department of Education-
al Institutions of the Ministry of Construction, RSFSR, as a text-
book for improving the qualifications of workers.

COVERAGE: The book describes the basic components of secondary cir-
cuits in distributors. It discusses electrical measuring instru-
ments, relays, and equipment for remote control, signaling and heat

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Secondary Switching in Distributing Systems 948

control. Operation of control wiring systems is described and methods of assembly and wiring of switchboard equipment are discussed. It also describes problems in organizing installation of switching systems. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

PART 1. COMPONENTS OF SECONDARY EQUIPMENT

Ch. 1. Concepts of Secondary Circuits	3
Ch. 2. Electrical Measuring Instruments	8
Ch. 3. Protective Equipment	16
1. Concepts of relays and relay protection	16
2. Classification of relays	19
3. Structure and operating principle of basic types of relays	23

Card 2/5

SOKOLOV, D.V.

PHASE I BOOK EXPLOITATION SOV/3572

Nebesnyy, Andrey Danilovich, Engineer, Vasiliy Vasil'yevich Skvortsov, Engineer,
and Dmitriy Vladimirovich Sokolov, Engineer

Mekhanizatsiya i industrializatsiya elektromontazhnykh rabot (Mechanization
and Industrialization in Electrical Assembly Work) Moscow, Gosstroyizdat,
1959. 218 p. 5,000 copies printed.

Ed. of Publishing House: G. M. Shirokova; Tech. Ed.: L. M. Osenko.

PURPOSE: This book is intended for technical personnel engaged in electrical assembly work.

COVERAGE: The book presents the fundamentals of installation practices of power-generating and distributing equipment. Devices used in the installation jobs and problems of mechanization are surveyed. Methods applied to such operations are described and evaluated. The material presented in this book reflects the most advanced practices as applied, for example, by the Glavelektromontazh (Main Administration for Power-Equipment Installation) of the Ministry for Civil Engineering and Industrial Construction of the RSFSR and by the

Card 1/6

Mechanization and Industrialization (Cont.)

SOV/3572

Ministry for Power-Plant Building of the USSR. No personalities are mentioned.
There are no references.

TABLE OF CONTENTS:

Introduction	3
Ch. I. Industrial Methods of Preparing for Electrical Construction	6
I. Pre-assembly sectors and dispatch stations	6
II. Engineering lines	13
1. Engineering line for the processing of shapes	14
2. Engineering line for the processing of sheet steel	17
3. Layout of wiring in steel pipes	20
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I. Use of hard-alloy drills	55
II. Dowel-fixing	65
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SOV/51-59-9-28/33

AUTHOR: Sokolov, D.V.

TITLE: Methods of Installing Wires of Type PPTO

PERIODICAL: Energetik, 1959, Nr 9, p 37 (USSR)

ABSTRACT: Answering an inquiry of Yakovishin (Ulan-Ude), the author states that cable PPTO should be used in combination with steel tubes, which in turn may be mounted on the surface of walls or underneath the surface. For open installation cable PR is cheaper. The PR cable is installed rollers or insulators. Installing cables PR or PPTO directly on walls is not recommended by existing rules and is not used.

Card 1/1

LIPKIN, B.Yu.. Prinimali uchastiye: GOL'DGOF, B.G., inzh.; BARYBIN,
Yu.G., inzh.; VORONKOV, Yu.F., inzh.; VENETSIANOV, Ye.A., inzh..
SOKOLOV, D.V., inzh., nauchnyy red.; KROMOSHCH, I.L., red.izd-va;
GORDEYEV, P.A., red.izd-va; RUDAKOVA, N.I., tekhn.red.

[Electric equipment at industrial enterprises] Elektrooborudovanie
promyshlennyykh predpriatii. Moskva, Gos.izd-vo lit-ry po
stroit., arkhit. i stroit.materialam, 1960. 399 p.
(MIRA 13:7)

(Electric driving)

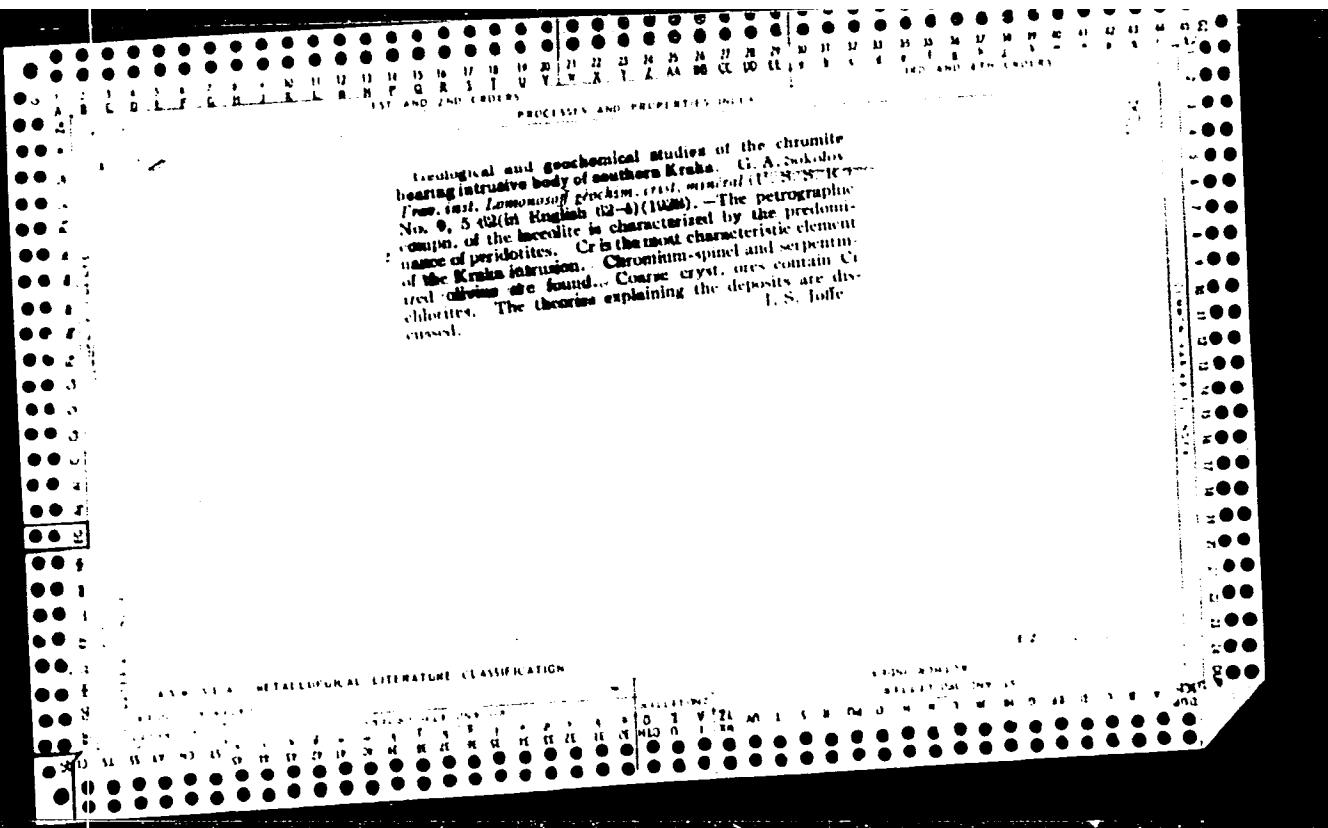
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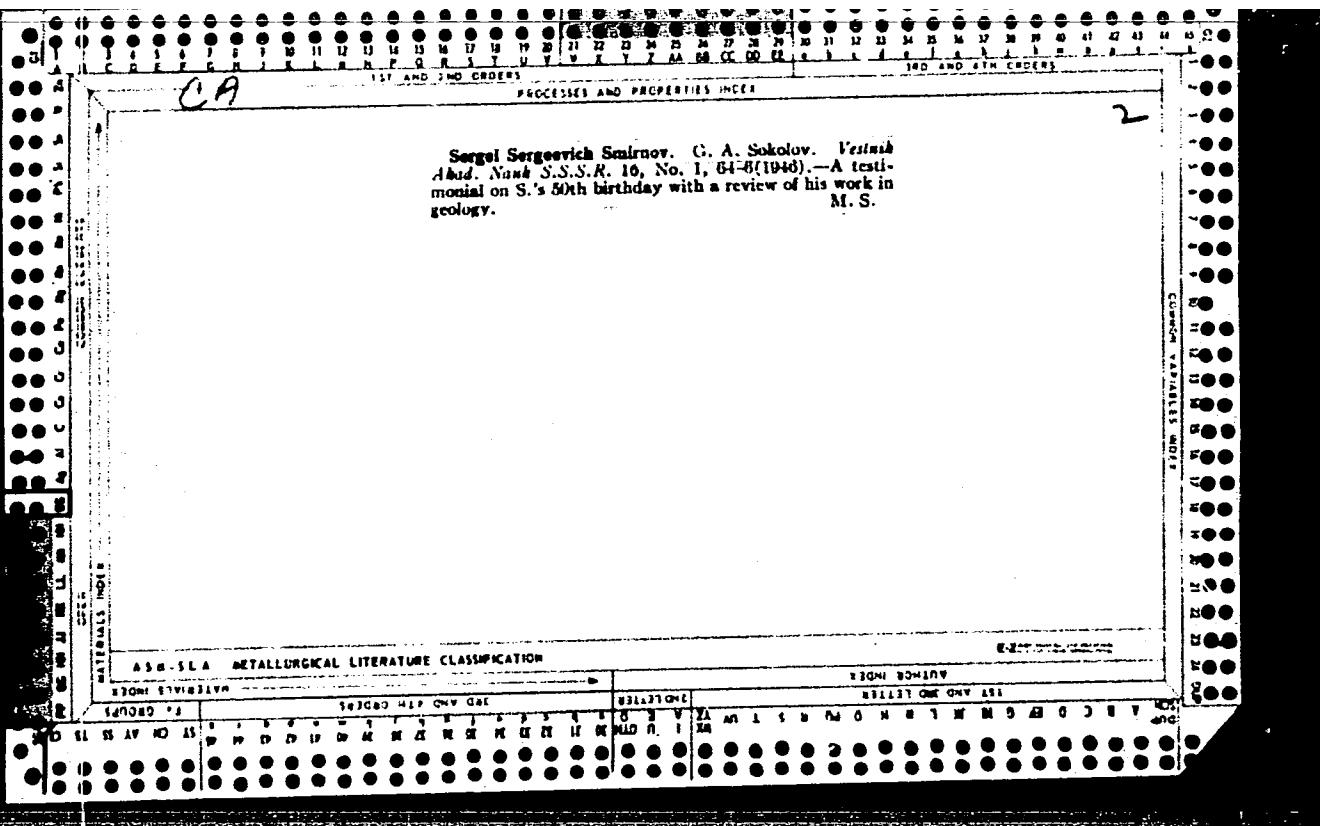
Corundum plagioclases of Kaslinskaya Dacha, Urals
A. A. Sokolov, *Trans. Geol. Prospecting Service U.S.S.R.* No. 36, 3-46 (1931); *Mineralog. Abhandl.* 6, 436.
Rocks previously named kyshtymite, barsovite, plumbosite
and corundum-anorthosite are now all included as corundum-plagioclases. All consist of plagioclase with more
or less of corundum, muscovite, biotite, rutile, zircon, spinel,
magnetite and apatite. Marundite is a pneumatically
altered variety contg. margarite and tremolite.
Here these rocks form veins or irregular masses intrusive
into serpentine and peridotite, the exo-contact zone being
(1) vermiculite (I), (2) enstatite-actinolite-chlorite, (3)
serpentine in which sunghite (II), chlorite, quartz, chal-
cophyll, carbonates and ferric oxides are more or less de-
veloped. Sunghite is a greenish white variety of serpen-
tine, $\text{Mg} 1.545$, $\text{SiO}_2 0.016$. The heating curve shows halts
at 200° , 410° and 710° . Analyses are given of I, II and
of a white chlorite (probably penninite). C. A. S.

Ca

8

Alkaline metasomatism in amphibolites of Mt. Ver
hiyash'el, South Urals. G. A. Slobodov. Izv. Akad.
Nauk, ser. N. R. S. S. R. 1958, No. 1, p. 82-101. Moscow
(1959). Some (amphibolitic) xenoliths in the
peridotitic serpentines of this mountain, composed of
hastingsite, albite, andesite, natrolite and cancrinite, are
considered to be the result of metasomatism of amphibolite
by "magmatic fluids which have passed through the bulk of
serpentines and peridotites." G. A. Slobodov.





GINZBURG, I.I.; BELYANKIN, D.S., akademik, redaktor; SOKOLOV, G.A., redaktor.

[Geochemistry and geology of the ancient weathering zone in the Urals]

Geokhimia i geologija drevnej kory vyvetrivanija na Urale. Moskva,
Izd-vo Akad.nauk SSSR, 1947. 134 p.(Akademija nauk SSSR. Institut geo-

logicheskikh nauk. Trudy, no.81). (MLRA 9:7)

(Ural Mountains--Geochemistry)

SOKOLOV, G.A.; GRIGOR'YEV, I.F., akademik, redaktor; BETEKHTIN, A.G.,
redaktor; POPOVA, S.T., redaktor; KARPOV, I.I., tekhnicheskiy
redaktor.

Composition, conditions of crystallization, and regularities of
chromites in the Urals. Trudy Inst.geol.nauk no.97:1-127 '48.

(MLRA 9:8)

1. Chlen-korrespondent Akademii nauk SSSR (for Betekhtin)
(Ural Mountains--Chromite)

BETEKHTIN, A.G., akademik, glavnnyi redaktor; VOL'FSO^N, F.I.; ZAVARITSKIY,
A.N.; KORZHINSKIY, D.S.; LEVITSKIY, O.D.; NIKOLAYEV, V.A.; SOKOLOV,
G.A., doktor geologo-mineralogicheskikh nauk, otvetstvennyi redaktor.

[Fundamental problems in the theory of magmatic ore deposits] Osnov-
nye problemy v uchenii o magmatogennykh rudnykh mestorozhdeniakh.
[Glavnnyi redaktor A.G.Betekhtin]. Moskva, Izd-vo Akademii nauk SSSR,
1953. 615 p. (MLRA 7:5)

1. Akademiya nauk SSSR. Institut geologicheskikh nauk. (Ore deposits)

GINZBURG, I.I.; SOKOLOV, G.A.

In connection with the article of V.N.Poddubnyi on "The problem of the origin
of iron ore." Izvest. Akad. Nauk S.S.R., Ser. Geol. '53, No.2, 113-14.
(CA 47 no.22:12148 '53) (MIRA 6:4)

GALDIN, N.Ye., [translator] DEMBO, T.M., [translator]; KANTSIL', B.A., [translator] KRASHENNIKOV, V.A., [translator] FRUMKINA, R.M. [translator]; SOKOLOV, G.A., redaktor; ZNAMENSKAYA, V.K., redaktor; IL'YIN, B.M., tekhnicheskiy redaktor.

[World iron ore deposits; collection of articles] Zhelezorudnye mestorozhdeniya mira; sbornik statei. Perevod s angliiskogo, frantsuzskogo i 1span'skogo N.E.Galdina, i dr. Pod.Red. i s predisloviem G.A.Sokolova. Moskva, Izd-vo inostrannoi lit-ry. Vol.1, 1955. 492 p. [Microfilm] (MLRA 9:1)

1. International Geological Congress. 19th, Algiers, 1952.
(Iron ores)

SOKOLOV, G.A., redaktor; ZNAMENSKAYA, V.K., redaktor; IL'IN, B.M., tekhnicheskij redaktor;

[Iron deposits of the world; a collection of articles Translated from the English, German, French and Italian] Zhelezorudnye mestorozhdeniya mira; sbornik statei. Perevod s angliiskogo, nemetskogo, frantsuzskogo i ital'ianskogo B.S. Izrailia i dr. Moskva, Izd-vo inostrannoi lit-ry. Vol. 2. 1955. 439 p. (MLRA 9:2)

1. International Geological Congress. 19th, Algiers. 1952.
(Iron ores)

Документ, в.п.

BETEKHTIN, A.G.; VOL'FSOHN, F.I.; ZAVARITSKIY, A.N.; KORZHINSKIY, D.Z.
LEVITSKIY, O.D.; NIKOLAYEV, V.A.; SOKOLOV, G.A., redaktor,
doktor geologo-mineralogicheskikh nauk; TIKHONOV, T.V.,
tekhnicheskiy redaktor.

[Fundamental problems in the theory of magmatic ore deposits]
Osnovnye problemy v uchenii o magnatogenennykh rudnykh mestorozhdeniakh. 2-e izd. Moskva, Izd-vo Akademii nauk SSSR, 1955,
622 p. [Microfilm] (MLRA 8:7)

(Ore deposits)

SOKOLOV, G.A., redaktor; GALDIN, N.Ye., [translator]

[Iron ore deposits of the world; a collection of articles. Translated from the English, French and Spanish] Zheleznorudnye mestorozhneniya mira; sbornik statei. Perevod s angliiskogo, frantsuzskogo i ispan-skogo N.E.Galdina. Pod red. i s predispl. G.A.Sokolova. Moskva, Izd-vo inostrannoj lit-ry, 1955. 2 v. maps. (part fold) 27 p.

(MLRA 10:5)

1. International Geological Congress, 19th. Algiers, 1952.
(Iron ores)

SHAPIRO, I.S.; TERPIGOREV, A.M., akademik, redaktor; SOKOLOV, G.A., professor,
redaktor; DEREKACH, V.G., doktor tekhnicheskikh nauk, redaktor;
DOLITSKAYA, S.S., redaktor izdatel'stva; MOSKOVICHIEVA, N.I., tekhnicheskiy redaktor

[Iron ores; a bibliography] Zheleznye rudy; bibliograficheskii
spravochnik. Moskva, 1957. 767 p. (MLRA 10:9)

1. Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii
(Bibliography--Iron ores)

POPOVA, A.S., starshiy bibliograf; SOKOLOV, G.A., doktor geolog-mineralogicheskikh nauk, otvetstvennyy red.; GALUSHKO, Ya.A., red.izd-va; NOVICHKOVA, N.D., tekhn.red.

[Endogenous ore formation and endogenous ore deposits; a bibliography of Soviet books and periodical literature from 1945 to 1954] Endogennoe rudoobrazovanie i endogennye rudnye mestorozhdeniya; bibliografia sovetskoi knizhnoi i zhurnal'noi literatury za 1945-1954 gg. [Moskva] 1958. 79 p.

(MIRA 11:6)

1. Akademiya nauk SSSR. Sektor seti spetsial'nykh bibliotek.
(Bibliography--Ore deposits)

POSPELOV, G.L., starshiy nauchnyy sotrudnik; LAPIN, S.S.; BELOUS, N.Kh.;
KLYAROVSKIY, V.M.; KINE, O.G.; VAKHRUSHEV, V.A.; SHAPIRO, I.S.,
starshiy nauchnyy sotrudnik; KALUGIN, A.S.; MUKHIN, A.S.; GARNETS,
N.A.; SPEYT, Yu.A.; SELIVESTROVA, M.I.; RUTKEVICH, V.G.; BYKOV, G.P.;
NIKONOV, N.I.; SAKOVICH, K.G.; MEDVEDKOV, V.I.; ALADYSHKIN, A.S.;
PAN, F.Ya.; RUSANOV, M.G.; YAZBUTIS, E.A.; ROZHDESTVENSKIY, Yu.V.;
SAVITSKIY, G.Ye.; PRODANCHUK, A.D.; LYSENKO, P.A.; LEBEDEV, T.I.;
~~KAMENSKAYA~~, T.Ya.; MASLENNIKOV, A.I.; PIPAR, R.; DODIN, A.L.;
MITROPOL'SKIY, A.S.; LUKIN, V.A.; ZIMIN, S.S.; KOREL', V.G.;
DERBIKOV, I.V.; BARDIN, I.P., akademik, nauchnyy red.; GOVBACHEV,
T.F., nauchnyy red.; YEROFEEYEV, N.A., nauchnyy red.; NEKRASOV, N.N.,
nauchnyy red.; SKOBNIKOV, M.L., nauchnyy red.; SMIRNOV-VERIN, S.S.,
nauchnyy red. [deceased]; STRUMILIN, S.G., akademik, nauchnyy red.;
KHLEBNIKOV, V.B., nauchnyy red.; CHINAKAL, N.A., nauchnyy red.;
SLEDZYUK, P.Ye., red.toma; SOKOLOV, G.A., red.toma; BOLDYREV, G.P.,
red.; VOGMAN, D.A., red.; ~~KASATKIN, P.F.~~, red.; KUDASHEVA, I.G.,
red.izd-va; KUZ'MIN, I.F., tekhn.red.

[Iron-ore deposits of the Altai-Sayan region] Zhelezorudnye mestoz
rozhdeniya Altai-Saianskoi gornoi oblasti. Vol.1. Book 1. [Geology]
(Continued on next card)

POSPELOV, G.L.---(Continued) Card 2.

Geologiya. Otvetstvennyi red. I.P. Bardin. Moskva. 1958. 330 p.
(MIRA 12:2)

1. Akademiya nauk SSSR. Mezhdudomstvennaya postoyannaya komissiya po zhelezu. 2. Postoyannaya mezhdudomstvennaya komissiya po zhelezu Akademii nauk SSSR (for Pospelov, Shapiro, Sokolov). 3. Zapadno-Sibirskiy filial Akademii nauk SSSR (for Vakhrushev, Pospelov.) 4. Zapadno-Sibirskoye geologicheskoye upravleniye (for Sakovich). 5. Krasnoyarskoye geologicheskoye upravleniye (for Pan). 6. Zapadno-Sibirskiy geologorazvedochnyy trest Chermetrazvedka (for Prodanchuk). 7. Sibirskiy geofizicheskiy trest (for Pipar). 8. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut (for Dodin). 9. Gornaya ekspeditsiya (for Mitropol'skiy). 10. Gornoye upravleniye Kuznetskogo metallurg.kombinata (for Lukin). 11. Tomskiy politekhnicheskiy institut (for Zimin). 12. Sibirskiy metallurg.institut (for Korel'). 13. Trest Sibneftegeofizika (for Derbikov). (Altai Mountains--Iron ores) (Sayan Mountains--Iron ores)

BARDIN, I.P., akademik, otv.red.; STRUMILIN, S.G., akademik; red.; SHIVYAKOV, L.D., akademik, red.; SHCHERBAKOV, D.I., akademik, red.; ANTIPOV, M.I., red.; BELYANCHIKOV, K.P., red.; BRODSKIY, V.B., red.; YEROFFEYEV, B.N., red.; LIBERMAN, A.Ya., red.; MELESHKIN, S.M., red.; ORLOV, I.V., red.; SMIRNOV-VERIN, S.S., red.; RIKMAN, V.V., red.; SAMARIN, A.M., red.; SLEDZYUK, P.Ye., red.; SKOBNIKOV, M.L., red.; SOKOLOV, G.A., red.; FREY, V.I., red.; KHLEBNIKOV, V.B., red.; SHAPIRO, I.S., red.; SHIRYAYEV, P.A., red.; KUDASHEV, A.I., red.izd-va; KUZ'MIN, I.F., tekhn.red.

[Magnetite ores of the Kustanay Province and their exploitation]
Magnitetovye rudy Kustanaiskoi oblasti i puti ikh ispol'zovaniia.
Otvetstvennyi red. I.P. Bardin. Moskva, Izd-vo Akad. nauk SSSR,
1958. 489 p. (Zhelezorudnye mestorozhdeniya SSSR). (MIRA 12:2)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr.
(Kustanay Province--Magnetite)

VITOVSKAYA, I.V., [translator], GALDIN, N.Ye., [translator], KRASHENINNIKOV,
V.A., [translator], KHARKEVICH, D.S., [translator], SOKOLOV,
G.A., red.; KARASEV, A.D., red.; ROMANOVICH, G.P., red.; SMIRNOVA,
N.I., tekhn. red.

[Studies on ore deposits; collection of articles] Problemy rudnykh
mestorozhdenii; sbornik statei. S. predisl. G.A. Sokolova. Moskva,
Izd-vo inostr. lit-ry, 1958. 495 p. (MIRA 11:11)
(Ore deposits)

SHATSKIY, N.S., akademik, otv.red.; SHCHERBAKOV, D.I., akademik, red.;
BELYAYEVSKIY, N.A., red.; DOLGOPOLOV, N.N., red.; LEVITSKIY,
O.D., red.; PUSHCHAROVSKIY, Yu.M., red.; SOKOLOV, G.A., red.;
NOSOV, G.I., red.izd-va; GUSEVA, I.N., tekhn.red.

[Characteristics of the distribution of mineral resources] Zakonomernosti razmeshcheniya poleznykh iskopaemykh. Vol.1. Moskva, 1958. 532 p. (MIRA 12:3)

1. Akademiya nauk SSSR. Komissiya po problemam "Zakonomernosti razmeshcheniya poleznykh iskopyayemykh." (Mines and mineral resources)

AUTHORS: Sokolov, G.A. and Komarov, P.V. SOV-11-58-3/14

TITLE: Transformation of Ludwigite in the Magnetite Deposit Zheleznyy Kryazh in the Eastern Transbaykal Region (Izmeneniye ludwigita na magnetitovom mestorozhdenii Zheleznyy Kryazh v Vostochnom Zabaykal'ye)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya Geologicheskaya, 1958, Nr 8, pp 27-37 (USSR)

ABSTRACT: The authors describe ludwigite, associated with magnesium skarns, as a late skarn mineral secreted metasomatically. It is often found in the contact-metasomatical "Zheleznyy Kryazh" iron ore deposits. Zones of forsterite skarns, usually serpentinous and containing small quantities of magnesium minerals, are the most favorable places for ludwigite. The magnetite is often found in such skarns and even forms magnetite ores. In places where ludwigite is formed, the magnetite usually fills the intervals between the prismatic rays of ludwigite; sometimes its aggregates replace these rays. This circumstance indicates that the magnetite was formed after the ludwigite. In single sectors, iron sulfides, mainly pyrrhotine, are also developed and belong to a later hydro-thermic stage. The rocks containing ludwigite are represented

Card 1/3

SOV-11-58-8-3/14

Transformation of Ludwigite in the Magnetite Deposit Zheleznyy Kryazh in
the Eastern Transbaykal Region

by mineral associations with largely changing content of waterless skarn minerals, ludwigite, magnetite, sulfides and other secondary minerals. Sulfides are distributed in these rocks irregularly. In zones with a high sulfide contents the ludwigite undergoes many transformations, and samples taken from various depths showed that they contain either thinly dispersed pyrrhotin or colloidal sulfides of iron. As a result of different laboratory research, it was found that the higher the degree of transformation of the ludwigite, the more boron it loses, even to such an extent that the Zheleznyy Kryazh deposit cannot be commercially exploited. It was also found that the decomposition of the ludwigite is especially intensive in those parts of the deposit where the sulfide mineralization is more pronounced.

There are 7 photos and 3 tables.

SUBMITTED: August 19, 1957

Card 2/3

SOV-11-56-8-3/14

Transformation of Ludwigite in the Magnetite Deposit Zheleznyy Kryazh in
the Eastern Transbaykal Region

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, minera-
logii i geokhimii AN SSSR, Moskva (Institute of Geology, Ore
Deposits, Petrography, Mineralogy and Geochemistry of AS
USSR, Moscow)

1. Ludwigite--Sources 2. Ludwigite--Properties 3. Ludwigite
--Availability

Card 3/3

KROTOV, Boris Petrovich; SOKOLOV, G.A., otv.red.; KUN, N.R., red.izd-va;
MAKUNI, Ye.V., tekhn.red.

[Differentiation of elements in weathering; lateritic weathering crust, its derivates - various types of iron and aluminum deposits and the tectonic effect on their distribution in geosynclines as exemplified by the Urals]. Differentsiatsiya elementov pri vyvetrivanii; lateritnaya kora vyvetrивания, ee proizvodnye - mestorozhdeniya zheleza i aliuminiya raznykh tipov - i vliyanie tektoniki na zakonomernoe obrazovanie i razmeshchenie ikh v geosinklinalakh na primere Urala. Moskva. Izd-vo Akad.nauk SSSR, 1959. 106 p. (Akademija nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no.35) (MIRA 12:5)
(Ural Mountain region--Ore deposits) (Weathering)

BARDIN, I.P., akademik, otv.red.; ANTIPOV, M.I., nauchnyy red.; GORBACHEV, T.F., nauchnyy red.; DOBIN, A.L., nauchnyy red.; YEROFEEV, B.N., nauchnyy red.; KALUGIN, A.S., nauchnyy red.; NEKRASOV, N.N., nauchnyy red.; POSPELOV, G.L., nauchnyy red.; SKOBNIKOV, M., nauchnyy red.; SMIRNOV-VERIN, S.S., nauchnyy red. [deceased]; STRUMILIN, S.G., akademik, nauchnyy red.; KHLEBNIKOV, V.B., nauchnyy red.; CHINAKAL, N.A., nauchnyy red.; SHAPIRO, I.S., nauchnyy red.; SLEDZHYUK, P.Ye., red. toma; SOKOLOV, G.A., red.roma; KUDASHEVA, I.G., red.izd-va; POLENOVA, T.P., tekhn.red.

[Iron ore deposits in the Altai-Sayan mountainous region] Zhelezorudnye mestorozhdeniya Altai-Saianskoi gornoi oblasti. Otvetstvennyi red. I.P.Bardin. Moskva. Vol.1. Book 2. [Description of the deposits] Opisanie mestorozhdenii. 1959. 601 p. (MIRA 13:2)

1. Akademiya nauk SSSR. Mezhdunodomstvennaya postoyannaya komissiya po zhelezu. (Altai Mountains--Iron ores)(Sayan Mountains--Iron ores)

Бардин Г.А.

BARDIN, I.P., akademik, otv.red.; ANTIPOV, M.I., nauchnyy red.; GORBACHEV, T.F., nauchnyy red.; DODIN, A.L., nauchnyy red.; YEROFEEV, B.N., nauchnyy red.; KALUGIN, A.S., nauchnyy red.; NEKRASOV, N.N., nauchnyy red.; POSPELOV, G.L., nauchnyy red.; SKOBNIKOV, M.L., nauchnyy red.; SLEDZYUK, P.Ye., nauchnyy red., red.toma; SMIRNOV-VERIN, S.S., nauchnyy red. [deceased]; SOKOLOV, G.A., nauchnyy red., red.toma; STRUMILIN, S.G., akademik, nauchnyy red.; KHLEBNIKOV, V.B., nauchnyy red.; CHINAKAL, N.A., nauchnyy red.; SHAPIRO, I.S., nauchnyy red.; KUDASHEVA, I.G., red.izd-va; POLENOVA, T.P., tekhn.red.

[Iron ore deposits of the U.S.S.R.] Zhelezorudnye mestorozhdeniya SSSR. Otv.red.I.P.Bardin. Moskva. Vol.1. [Iron ore deposits of the Altai-Sayan mountainous region] Zhelezorudnye mestorozhdeniya Altay-Saianskoi gornoi oblasti. Book 2. [Description of the deposits] Opisanie mestorozhdenii. 1959. 601 p. (MIRA 13:3)

1. Akademiya nauk SSSR. Mezhdunovostvennaya postoyannaya komissiya po zhelezu.

(Altai Mountains--Iron ores)
(Sayan Mountains--Iron ores)

SHATSKIY, N.S., akademik, otv.red.; SHCHERBAKOV, D.I., akademik, red.;
BELYAYEVSKIY, N.A., red.; DOLGOPOLOV, N.N., red.; LEVITSKIY,
O.D., red.; PUSHCHAROVSKIY, Yu.M., red.; SOKOLOV, G.A., red.;
SHATALOV, Ye.T., red.; NOSOV, G.I., red.izd-va; NOVICHKOVA,
N.D., tekhn.red.

[Characteristics of the distribution of mineral resources] Zako-
nomernosti razmeshcheniya poleznykh iskopaemykh. Moskva. Vol.2.
1959. 504 p.

(MIRA 13:6)

1. Akademiya nauk SSSR. Komissiya po probleme "Zakonomernosti
razmeshcheniya poleznykh iskopaemykh. 2. Institut geologii
rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN
SSSR (for Sokolov, Shatalov).
(Mines and mineral resources)

SOKOLOV, G.A.

Principles of compiling metallogenic maps of iron in the U.S.S.R.
at a 1:5,000,000 scale. Zakonom. razm. polezn. iskop. 2:78-85
'59. (MIRA 15:4)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, minera-
logii i geokhimii AN SSSR.
(Iron ores--Maps)

BETEKHTIN, A.G.; SOKOLOV, G.A.

Sixtieth anniversary of Academician D.S.Korzhinskii. Geol.
rud.mestozh. no.6:3-4 N-D '59. (MIRA 13:7)
(Korzhinskii, Dmitrii Sergeevich, 1899-)

KORZHINSKIY, D.S., otv.red.; AMIRASLANOV, A.A., red.; SOKOLOV, G.A., red.;
OVCHINNIKOVA, S.V., red.izd-va; BYKOVA, V.V., tekhn.red.

[Genetic problems of ores] Geneticheskie problemy rud. Moskva,
Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1960.
173 p. (Doklady sovetskikh geologov. Problema 16).

(MIRA 13:11)

1. International Geological Congress. 21st, Copenhagen, 1960.
(Ore deposits)

SHATSKIY, Nikolay Sergeyevich, akademik, glav. red. [deceased];
SMIRNOV, V.I., red.; SHCHERBAKOV, D.I., akademik, red.;
GORSKIY, I.I., red.; DOLGOPOLOV, N.N., red.; PUSHCHAROV-
SKIY, Yu.M., red.; SOKOLOV, G.A., red.; TUGOLESSOV, D.A.,
red. izd-va; KASHINA, P.S., tekhn. red.

[Mineral distribution characteristics] Zakonomernosti raz-
meshcheniya poleznykh iskopaemykh. Moskva, Vol.3. 1960. 651 p.
(MIRA 14:5)

I. Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh
nauk. Sovet po izucheniyu zakonomernostey razmeshcheniya po-
leznykh iskopayemykh. (Minerals)

BETEKHTIN, A.G.; ILEVITSKIY, O.D.; PUSHCHAROVSKIY, Yu.M.; SOKOLOV, G.A.;
SHATALOV, Ye.T.; SHIPULIN, F.K.

Nikolai Sergeevich Shatskii; obituary. Geol. rud. mestorozh.
no.5:3-5 S-O '60. (MIRA 13:10)
(Shatskii, Nikolai Sergeevich, 1895-1960)
(Geology)

SOKOLOV, G.A.

Some problems relative to the study of endogenous ore formation and
trends in further investigations. Geol.rud.mestorozh. no.5:5-20
(MIRA 14:9)
S.O '61.

I. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii
i geokhimii AN SSSR, Moskva.
(Ore deposits)

PAVLOV, Nikolay Vasil'yevich; SOKOLOV, G.A., prof., doktor geolog.-min.
nauk, otd.red.; SHOLIN, P.P., red.izd-va; KUZ'MIN, I.F., tekhn.
red.; SHEVCHENKO, G.N., tekhn.red.

[Magnesioferrite deposits of the Tunguska syneclyse area of
the Siberian Platform] Magnomagnetitovye mestorozhdeniya raiona
Tungusskoi sineklizy Sibirs'koi platformy. Moskva, Izd-vo Akad.
nauk SSSR, 1961. 223 p. 12 plates (Akademija nauk SSSR.
Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii
i geokhimii. Trudy, no.52). (MIRA 15:4)
(Yenisey Valley—Magnesioferrite)

SOKOLOV, G.A., doktor geol.-min. nauk, otd. red. Prinimali uchastiye: VLASOV, D.K.; GLAGOLEV, A.A.; ZHARIKOV, V.A.; LOGINOV, V.P.; LUKIN, L.I.; MYAKELYA, R.O.; OMEL'YANENKO, B.I.; OSTROVSKIY, I.A.; PERTSEV, N.N.; PODDLESSKIY, K.V.; RUSINOV, L.V.; SOFIANO, T.A.; TIMOFEEVA, L.K.; SHABYNIN, L.I.; SHADLUN, T.N.; LAPIN, V.V., red. izd-va; MAKUNI, Ye.V., tekhn. red.

[Physicochemical problems in connection with the formation of rocks and ores] Fiziko-khimicheskie problemy formirovaniia gornykh porod i rud. Moskva, Vol.1. 1961. 658 p. (MIRA 14:10)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. 2. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva (for Vlasova, Glagolev, Zharkov, Omel'yanenko, Ostrovskiy, Pertsov, Shabynin). 3. Moskovskiy geologo-razvedochnyy institut im. S. Ordzhonikidze (for Shabynin, Pertsev.) (Petrology)

DYMKIN, A.M.; SOKOLOV, G.A.

Colloform formation of the endogenous magnetite in the Kurzhunkul' iron ore deposit. Geol. i geofiz. no.1:77-85 '61. (MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.
(Turgay gates—Magnetite)

BETEKHTIN, A.G.; VOL'FSO^N, F.I.; GENKIN, A.D.; DUBROVSKIY, V.N.; YEROFEYEV,
B.N.; KONSTANTINOV, R.M.; MATERIKOV, M.P.; SOKOLOV, G.A.; STRAKHOV,
N.M.; TATARINOV, P.M.; TOMSON, I.N.; SHADLUN, T.N.; SHATALOV, Ye.T.;
SHIPULIN, F.K.

Oleg Dmitrievich Levitskii; obituary. Geol. rud. mestorozh. no.2:
3-6 Mr-Ap '61. (MIRA 14:5)
(Levitskii, Oleg Dmitrievich, 1909-1961)

VOL'FSOM, F.I.; LUKIN, L.I.; SOKOLOV, G.A.

In memory of Academician Sergei Sergeevich Smirnov. Geol. ^{Nud.}
mestorozh. no.6:114-116 N-D '62. (MIRA 15:12)
(Smirnov, ~~Sergei~~ Sergei Sergeevich, 1895-1947)

ROZIN, Mark Solomonovich; POPOV, K.M., doktor ekon. nauk, red.;
SOKOLOV, G.A., doktor geol.-miner. nauk, red.; LAVRENT'YEVA,
Ye.V., red.; SHAPOVALOVA, N.S., mladshiy red.; KISELEVA,
Z.A., red. kart.; VILENSKAYA, E.N., tekhn. red.

[Geography of the mining industry of capitalist countries]
Geografiia gornodobystvaiushchei promyshlennosti kapitalisti-
cheskogo mira. Moskva, Geografgiz, 1962. 556 p.
(MIRA 15:9)

(Mineral industries) (Geography, Economic)

SOKOLOV, G.A.; PAVLOV, D.I.

Geochemistry of titanium during the metasomatic process.
Dokl. AN SSSR 142 no.2:445-448 Ja '62. (MIRA 15:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR. Predstavлено академиком
D.S.Korzhinskim.

(Anzas Region—Titanium)
(Metasomatism)

SOKOLOV, G.A., nauchn. red.; KITAYENKO, L.G., red.izd-va; SERGEYeva,
N.A., red.izd-va; IVANOVA, A.G., tekhn. red.

[Problems in studying and methods of prospecting for hid-
den mineralization] Voprosy izuchenija i metody poiskov
skrytogo orudnenija; sbornik statei. Moskva, Gosgeol-
tekhizdat, 1963. 463 p. (MIRA 17:4)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozh-
deniy, petrografii, mineralogii i geokhimii.

LEVITSKIY, O.D. [deceased]; ARISTOV, V.V.; KONSTANTINOV, R.M.; STANKEYEV, Yd.A.;
SOKOLOV, G.A., prof., otv.red.; ZHAMENSKAYA, N.V., red.izd-va;
GUS'KOVA, O.M., tekhn.red.

[Etyka tin ore deposit in eastern Transbaikalia] Etykinskoe
glovorudnoe mestorozhdenie Vostochnogo Zabaikal'ia, Moskva, 1969.
121 p. (Akademija nauk SSSR. Institut geologii rudnykh mestorozhdenii,
petrografii, mineralogii i geokhimii. Trudy, no.100) (MIRA 17:3)

1. Chlen-korrespondent AN SSSR (for Levitskiy).

ZUDIN, V.M.; YAKOBSON, A.P.; KOSTIN, I.M.; GALATONOV, A.L.; GAMAYUROV, A.I.;
TSVERLING, A.L.; MALYSHEVA, T.Ya.; SOKOLOV, G.A.; RUDNEVA, A.V.;
TSYLEV, L.M.; GUL'TYAY, I.I.

Effect of the sintering temperature on the mineralogical composition
of sinter and its metallurgical properties. Stal' 23 no.6:481-485
(MIRA 16:10)
Je '63.

1. Magnitogorskiy metallurgicheskiy kombinat i Institut metallurgii
im. A.A.Baykova.

PAVLOV, Dmitriy Igorovich; SOKOLOV, G.A., doktor geol.-miner. nauk,
otv. red.; MISHINA, R.L., red.izd-va; GUS'KOVA, O.M.,
tekhn. red.

[Anzas magnetite deposit and the participation of chlorine
in its formation] Anzasskoe magnetitovoe mestorozhdenie i
uchastie khlora v ego formirovani. Moskva, Izd-vo "Nauka,"
1964. 128 p.
(MIRA 17:4)

SVITAL'YEV, Alex'androvich (1900-1981) - 1964, doktor
geolog-miner. Nauk, stv. na.

[Geology of the ore deposits in Transbaikalia] Geologiya
rudnykh mestorozhdenii Zabaykalia. Nauka, Nauka, 1964.
(NIZI 17;11)
333 p.

VLASOV, K.A.; BELOV, N.V.; VOL'FSO, F.I.; GENKIN, A.D.; GINZBURG, A.I.;
LUKIN, L.I.; KORZHINSKIY, D.S.; SALTYKOVA, V.S.; SAUKOV, A.A.;
SOKOLOV, G.A.; SHCHERBAKOV, D.I.; SHADIUN, T.N.

Konstantin Avtonomovich Nenadkevich, 1830-1963; obituary. Geol.
rud. mestorozh. 6 no.1:123-125 Ja-F '64.
(MIRA 17:11)

BUGEL'SKIY, Yu.Yu.; VITOVSKAYA, I.V.; GODLEVSKIY, M.N.; ZVEREVA, Ye.A.; KORIN, I.Z.; NIKITIN, K.K.; NIKITINA, A.P.; PISEMSKIY, G.V.; SAPOZHNIKOV, D.G.; SOKOLOV, G.A.; CHUKHROV, F.V.; SHCHERBAKOV, D.I.; EDEL'SHTEYN, I.I.; YANITSKIY, A.A.

Il'ia Isaakovich Ginzburg, 1882?-1965; obituary. Geol.rud.mestorozh.
7 no.4:109-110 Jl-Ag '65. (MIRA 18:8)

OYKS, G.N.; SOKOLOV, G.A.; ZUYEV, I.M.; PETROV, V.K.; ZUBAREV, A.G.;
KLIMASHIN, P.S.

Treatment of liquid transformer steel in the ladle. Stal'
25 no.8:711-715 Ag '65. (MIRA 18:8)

SOKOLOV, G. A. Cand Tech Sci -- (diss) "Viscosity, processes of crystallization,
initial [] terminal/
and the mineralogical composition of primary and finished blast-furnace slags."
Mos., 1957, 13 pp 22 cm. (Acad Sci USSR. Inst of Metallurgy im A.A. Baykov), 110 copies
(KL, 7-57, 107)

44

SOV/137-58-9-18662

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 72 (USSR)

- AUTHORS: Oyks, G.N., Sokolov, G.A.
- TITLE: A Slag Collector (Shlakovyy kollektor)
- PERIODICAL: V sb.: Primeniye kisloroda v metallurgii. Moscow, Metalurgizdat, 1957, pp 165-172

ABSTRACT: The design of a collector furnace to smelt synthetic slag (S) for use in conversion of high-phosphorus pig iron is presented. The major component of the assembly is a rotating lined tube which constitutes the melting space (MS). The rate of rotation chosen is such that the charge materials will be retained on the tube walls by centrifugal force and will form a cylindrical bath. The pulverized, mixed charge is introduced at one end of the tube, while a high-temperature jet formed by the combustion of coke gas with heated O₂-enriched air is introduced at the other end. The jet gases passing through the CS yield heat to the charge and then pass through a slag pocket and a recuperator and finally are discharged into the atmosphere. The incline of the MS tube is such as to assure slow flow of the melted S. The finished S is collected in a collector from which it flows into a

Card 1/2

SOV/137-58-9-18662

A Slag Collector

slag pot periodically by the incline of the collector. The hot zone of the MS is lined with dolomite blocks over pitch, the cold portion with fireclay brick. The shell of the MS has a boxlike structure to provide the necessary rigidity. Coolant air is pumped into the space between shell and rotary furnace. The charge for dephosphorizing S consists of final open-hearth S, limestone, and scale. The components are chosen so as to obtain a low-melting (m.p. 1300-1350°C) S having the following % contents: SiO₂ 9-10, CaO 32-40, FeO 37-45.

G.S.

1. Slags--Synthesis
2. Slags--Processing
3. Furnaces--Design
4. Furnaces--Operation

Card 2/2

- Sokolov, G.A.

USSR /Chemical Technology. Chemical Products
and Their Application
Control and Measuring Devices.
Automatic Regulation.

H-3

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1572

Author : Tsylev L.M., Sokolov G.A.

Inst : Institute of Metallurgy, Academy of Sciences USSR

Title : Determination of the Viscosity of Fused Slag by
Means of an Electric Viscosimeter.

Orig Pub: Tr. In-ta metallurgii. AN SSSR, 1957, No 1, 33-38

Abstract: Description of the unit and the procedure for
measuring the viscosity of fused slag by means
of the rotational electric viscosimeter developed
at the Institute of Metallurgy, imeni A.A. Baykov,
of the Academy of Sciences USSR. The instrument

Card 1/2

SOKOLOV, G.A.

18 18

6
AE 2 C

A study of viscosity of primary blast-furnace slags. N. L. Zhilo, A. V. Rudnaya, G. A. Sokolov, and I. M. Tsvet. *Izvest. Akad. Nauk S.S.R., Otdel. Tekh. Nauk* 1957, No. 2, 27-35; cf. *C.A.* 50, 31724.—The effect of alkalis and of FeO in the presence of alkali upon the viscosity of the primary blast-furnace slags was investigated. K₂O lowered the viscosity and the crystn. temp. of the acid and basic Al₂O₃-free slag. In slags contg. 5-10% Al₂O₃ higher K₂O lowered the viscosity and the crystn. temp. of the acid slags only, and had the opposite effect upon the basic slags. The optimum slag compn., with up to 5% Al₂O₃, with respect to fluidity, was CaO 25-52, SiO₂ 42-8, and K₂O 0.0-17%. FeO lowered the viscosity and the slag initial crystn. temp. more strongly in acid than in basic slags. The addn. of 3-10% alkali lowered the slag viscosity with the CaO-SiO₂ ratio between 0.81 and 1.18. The alkali in the slag displaced the FeO in the fused slag, and in this way speeded up the Fe reduction. —W. M. Sternberg

PLD AM

UTHOR:

Sokolov, G.A. (Engineer)

130-3-19/22

ITLE:

New type of frame for open-hearth furnace charging doors.
(Novyy tip ramy zavalochnykh okon martenovskikh pechey)..

ERIODICAL:

"Metallurg" (Metallurgist), 1957, No.3, pp.38-39. (U.S.S.R.)

BSTRACT:

A description is given of a design of charging-door frame designed by the author together with M. Ya. Kapisenko. The frame consists of an H-shaped welded structure of seamless tubes, 219 mm in diameter and with walls 8 mm thick. Before welding the tubes are cold-rolled to an oval shape 170 x 250 mm. The water is introduced into the lower part of the "legs" and the steam-water emulsion is removed from the horizontal and vertical parts of the frame separately, along pipes which are later combined. Suitable choice of water tube cross sections prevents over heating in any part of the frame. The new frames have been continuously under test for one and a half years on one of the open hearth furnaces at the "Krasnioktyabr" works and have been found to be superior to the normal frame construction, their period of service being 7 - 8 months greater. The new construction is especially advantageous when the pressure is increased from 2 to 4.5 atm. gauge. The small weight, ease of manufacture and high reliability of the new frames has caused them to be adopted on most of the furnaces in the shop. Adoption on all furnaces is estimated to promise an economy of 70 000 roubles annually. There are three diagrams.

Card 1/1

SSOCIATION: Moscow Institute of Steel (Moskovskiy institut stali).

VAILABLE:

SOKOLOV, G.A.

24-6-7/24

AUTHORS: Zhilo, N. L., Rudneva, A.V. and Sokolov, G.A. (Moscow).
TITLE: A comparison of the physico-chemical properties of primary slags in blast furnaces with their mineralogical composition. (Sopostavleniye fiziko-khimicheskikh svoystv pervichnykh domennykh shlakov s ikh mineralogicheskim sostavom).

PERIODICAL: "Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk"
(Bulletin of the Ac. Sc., Technical Sciences Section),
1957, No.6, pp.37-42 (U.S.S.R.)

ABSTRACT: In this paper data are given on the phase composition and a comparison is made of the real and the specified mineralogical composition of primary blast furnace slags of cast and open hearth pig iron with their physical properties. The aim of the here described investigations was to establish the reason for the differing behaviour of K_2O in acidic and basic slags in blast furnaces. The results of investigation of the viscosity of the studied slags were described in detail in earlier work of these authors "On investigating the viscosity of primary blast furnace slags" (same journal, 1957, No.2, pp.27-35). A comparison of viscosity, temperature of crystallisation, and the phase composition of primary slags in blast furnaces has led to a clarification of the adverse effect of alkalis on the physical properties of basic slags
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24-6-7/24

A comparison of the physico-chemical properties of primary slags in blast furnaces with their mineralogical composition.
(Cont.)

in blast furnaces. The latter is explained by the formation, in the molten slag, of high temperature alkali aluminium silicates having a volume skeleton structure of anion complexes (of the type of $K_2O \cdot Al_2O_3 \cdot 2SiO_2$). The alkali aluminium silicates and alkali silicates which are formed in acidic slags have lower melting points (750 C for calcium silicates; 1170 C for orthoclase). This explains the decrease in viscosity and temperature of crystallisation when alkalis are added to acidic blast furnace slags. The

Card 2/2
formation of fusible alkali silicates, dissociating at low temperatures, can explain the decrease in viscosity and temperature of crystallisation of both acidic and basic slags in blast furnaces, in the absence of alumina. The characteristic mineralogical combinations of the real phase state of the slags, in the range which is optimal from the point of view of easy fusibility and high fluidity, indicate that these are near to the eutectic range of the studied multi-component system. There are 7 figures, 1 table and 2 Slavic references.

SUBMITTED: July 28, 1956.

AVAILABLE:

SOKOLOV, G.A.

130-9-5/21

AUTHOR: Sokolov, G.A. (Engineer)

TITLE: Reconstruction of Open-Hearth Furnaces at the "Krasnyy Oktyabr'" works. (Rekonstruktsiya martenovskikh pechey na zavode "Krasnyy Oktyabr'")

PERIODICAL: Metallurg, 1957, Nr 9, pp.11-14 (USSR).

ABSTRACT: Because of the unusual development of the "Krasnyy Oktyabr'" works since its establishment in Stalingrad in 1897 the open-hearth furnaces there have many peculiar features. This article describes furnace reconstructions effected since 1953 during routine stoppages. The changes provided for: increases in maximal firing by eliminating the lack of balance between the charge weight and the bottom area, volume of checkers and slag pockets and so on; modernisation of the reversing valves, instrumentation and automatic regulating devices; increasing the strength and rigidity of the steelwork. The furnaces dealt with are 50-ton (partly natural gas fired) and 110 ton (oil fired, air atomisation). Besides diagrams of the furnaces the article contains a table showing values before and after the reconstruction of roof and checker service lives (heats), tap-to-tap times and durations of the charging, melting and boil periods, mean charge weight, weight of steel melted per

Card 1/2

130-9-5/21

Reconstruction of Open-Hearth Furnaces at the "Krasnyy Oktyabr'" works.

campaign, productivities and relative amounts of rimming, killed carbon and alloy steels melted. 1 table, 2 figures.

ASSOCIATION: Moscow Institute of Steel. (Moskovskiy Institut Stali).

AVAILABLE: Library of Congress.

Card 2/2

OYKS, G. N., SOKOLOV, G. A., ANSHELES, I. I., NAN-JAO-VEN, DANILIN, V. I. and
LAPSHOVA, M. G."
Moscow Institute of Steel.

"Application of the Vacuum to Improve the Alloy Steel Properties."
paper presented at Second Symposium on the Application of Vacuum Metallurgy.

1-6 July 58, Moscow

SOKOLOV, D. A.

SOV/1728

PLATE I BOOK EXPLOITATION

18(0) Abadzhyan, Mark S.S.R. Institut metallurgii.

Sovremennye problemy metallurgii [Modern Problems in Metallurgy]. Izd-vo Akad. SSSR, Izd-vo Akad. Nauk SSSR, 1958. 640 p., 3,000 copies printed.

Reed, M. A.M. Seminar, Corresponding Member, USSR Academy of Sciences; Eds. of Publishing House V.I. Shchepetkov, and A.M. Baranov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This book is intended for scientific and technical personnel, in the field of metallurgy.

CONTENTS: This is a collection of articles on certain aspects of Soviet metallurgy. The book is dedicated to Academician Vassili Pavlovich Hardin on the occasion of his 75th birthday. The book is divided into seven parts. The first part consists of two articles presenting a brief account of the history and professional activity of the Soviet metallurgist Vassili Pavlovich Hardin. The second part includes an article by John Chapman, Nicholas Grant, and John Elliott (M.I.T.), describing their meeting with Hardin in Moscow and also an article by John Chapman, Nicholas Grant, and John Elliott (M.I.T.) describing their meeting with Hardin in the United States. The second part consists of three visits to the United States. The third part deals with the Soviet articles and deals with raw materials and fuels for the Soviet metallurgical industry. The third part represents the major portion of the book. It consists of 25 articles dealing with the various aspects of the metallurgy of pig iron and steel. The fourth part consists of two articles treating the metallurgy of non-ferrous metals. The fifth part consists of three articles on the forming of metals. The sixth part consists of eight articles discussing certain aspects of physical metallurgy. The last part deals with general problems in the field of metallurgy. References are given after each article. No possibilities are mentioned.

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Modern Problems in Metallurgy

Rudnev, A.V. [Candidate of Geological and Mineral Sciences], G.A. Seklova and N.L. Zhdilo [Candidates of Technical Sciences], and I.I. Gut'vay [Junior Scientist, Scientific Assistant, Metallurgical Institute]. Report A.A. Savkov, As USSR Expert of Almalyka on Phase Composition and Viscosity of Primary Blast Furnace Slags. 136

Rudnev, I.P., I.Yu. Korobkin, and L.N. Rayley [Metallurgical Institute, Institute Izmail, A.A. Savkov, As USSR Expert of Gulyar Between Pig Iron and Blast Furnace Slags. 149

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Card 5/2

SOCKELLOU, G.H.

18(4)

PHASE 1 - SOCK EXPLOITATION

SOV/1896

Akademiya nauk SSSR. Institut metallurgii

Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya
(Metallurgy, Study of Metals, and Physicochemical Methods of Investigation)
Moscow, Izd-vo AN SSSR, 308 p. (Series: Its: Trudy, vyp. 3) Errata slip
inserted. 3,000 copies printed. 1958.

Resp. Ed.: I.P. Bardin, Academician; Ed. of Publishing House: A.N. Chernov;
Tech. Ed.: I.F. Kuzmin.

PURPOSE: This book is of interest to researchers in metallurgy, as well as to the
technical personnel of the metallurgical industry.

COVERAGE: This volume of the Trudy (Transactions) of the Institut metallurgii
imeni A.A. Baykova (Metallurgical Institute im. A.A. Baykov) contains 31
studies on metallurgy, individual metals and alloys, and physicochemical
methods of investigation. Some of the studies pertain to the reduction of
titanomagnetites, the viscosity and other characteristics of blast furnace
slag, dislocation in metals, cracking of metals due to corrosion, simultaneous

Card 1/6

Metallurgy, Study of Metals (Cont.)

SOV/1896

solubility of metals at various temperatures, apparatus for measuring electrical resistance and for determining the melting point of alloys and metals, optical spectral analysis, quantitative determinations by the sublimation method, and aging of alloys. Each study is accompanied by references.

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Tsylev, L.M., N.L. Zhilo, and G.A. Sokolov. Viscosity of Natural Primary and Final Blast Furnace Slags of Cast and Conversion Iron	35
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~~Series 2/6~~

Sokolov, G. A.

130-3-8/21

AUTHORS: Sokolov, G. A., Engineer and Oyks, G. N., Professor Doctor
of Technical Sciences.

TITLE: New installation for the vacuum treatment of liquid steel.
(Novaya ustanovka dlya vakuumirovaniya zhidkoy stali).

PERIODICAL: Metallurg, 1958, No. 3, pp. 16-21 (USSR).

ABSTRACT: In this article a new vacuum installation in the electric
steel-melting shop of the "Krasnyy Oktyabr'" Works in
Stalingrad is described. The installation was designed
at the works under the direction of the Moscow Steel
Institute (Moskovskiy Institut Stali). V. M. Skvortsov,
V. S. Kiryukhin, M. V. Podskrebov, G. I. Kozlitin are
named as works-staff members who participated in the design
work with institute-staff members. The installation is
intended for degassing liquid steel in a ladle or during
pouring from one ladle to another; it also enables steel
to be top- or bottom-poured in neutral or protective
atmospheres. The weight of steel treated is 12 - 20 tons.
The chamber for ladle degassing (Fig. 1) consists of a main
cylindrical (diameter 3300 mm and height 2200 mm) chamber
with a flat lid. The lid is provided with a bunker to
hold additions, an inspection window and an arrangement
Card 1/3 through which steel from another teeming ladle can be

130-3-8/21

New installation for the vacuum treatment of liquid steel.

Scoured into the ladle standing in the evacuated chamber. The lid-raising mechanism is a modification of that designed by the "Dneprospetsstal'" Works. The vacuum chamber for bottom pouring consists of a base and top part 800 and 2100 mm high, respectively, with a 20 mm thick rubber ring seal. The chamber is for a three-ingot arrangement and is provided with three bunkers for exothermic mixture, an inspection window and a stoppered funnel vessel in which a layer of metal is maintained as a seal. The top part of the chamber is handled by the pouring crane. The arrangement for top pouring is that a funnel is sealed to the hot top, a bunker being provided for adding exothermic mixture, a side-arm for evacuating the system and a signalling device for the metal level. The central pumping station (Fig.4) is equipped with two PBH-60 pumps each rated at 2900 m³/hour at 90% vacuum. The pumps can be used in series or parallel and the article describes the valve system. For improving on the 15-20 mm Hg produced by the pumps ejectors are provided and the article deals with the theory and characteristics of these and tabulates test results with steam pressures of 1 - 6.5 atm gauge.

Card 2/3 The valves used are of an original design (Fig.7) and have

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New installation for the vacuum treatment of liquid steel.

sealing rings of paranite, this being selected after many unsuccessful attempts to use other materials. The manufacture of the rings is described, as is the cooler with a cooling surface of 5.2 m^2 . The article concludes with an account of the inertial dust-catcher for protecting the pumps. These are followed by an oil filter. The whole installation is said to have worked satisfactorily since its commissioning in November, 1957, producing residual pressures of 12 - 14 mm Hg even with vigorously rimming steels.

There are 8 figures and 1 table.

ASSOCIATION: Moscow Steel Institute. (Moskovskiy Institut Stali).

AVAILABLE: Library of Congress.

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SOV/130-58-10-5/18

AUTHORS: Sokolov, G.A., Oyks, G.N. and Ansheles, I.I.

TITLE: Vacuum Treatment of Alloy Steel (Vakuumnaya obrabotka legirovannoy stali).

PERIODICAL: Metallurg, 1958, Nr.10, pp.10-14 (USSR)

ABSTRACT: In November 1957 an installation (described in "Metallurg", 1958, Nr.3) for the vacuum treatment of liquid steel was commissioned at the "Krasnyy Oktyabr'" works. The authors describe results obtained with vacuum treatment of type 30KhGSA steel in the ladle and also during pouring. Ladle treatment of 12-ton heats was effected in 20-ton ladles to allow for the "boiling" of the metal. Observations were made continuously on the slag surface and the stopper. Initially all heats behaved rather similarly, but later some continued to boil violently while others became quieter. Because of possible damage to stopper-rod sleeves and cooling of the metal the treatment was stopped 5-7 minutes after the attainment of a vacuum of 15-20 mm Hg. Vacuum fusion of samples showed that the hydrogen and nitrogen contents decrease by 0.3-2.0 cm³/100 g and 0.0007-0.003%.

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SOV/130-58-10-5/18

Vacuum Treatment of Alloy Steel.

respectively, through vacuum treatment. The metal oxygen decrease was irregular, but analyses of the gases evolved during treatment (Table 1) showed that generally 12-37% CO and CO₂ were present; interpretation of results is complicated by the presence of refractory-derived non-metallic inclusions and the determination of non-metallic inclusions is now being carried out in the finished steel. Frequency curves were constructed (Fig.2) from tests on the strength and plasticity characteristics of vacuum-treated and ordinary steels; both were better in the treated metal; the macrostructures were almost the same. In another method of treatment the vacuum was treated directly in the ingot mould (4.1 tons) during its filling from a tundish. The nozzle to the mould is initially closed with a thin steel plate, which enables evacuation to a residual pressure of 10-12 mm to be effected. The plate melts when the metal is poured on and the ingot mould is filled at a pressure of about 5-7 mm Hg in 2.5-3.0 minutes. The metal jet was seen to be irregular and bubble-evolution was observed in the metal filling the mould, especially at the walls.

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SOV/130-58-10-5/18

Vacuum Treatment of Alloy Steel.

The surface of ingots top-poured in this way differed little from that of ordinary bottom-poured ones. The slight blemishes on the edges of the vacuum poured ingots disappeared during heating in the soaking pits and there was rather less segregation. Comparison of the mechanical properties of rolled vacuum-treated and ordinary steel (Table 2) showed that the former was generally superior. The author urges that further improvements be made in the vacuum pouring process. There are 3 figures and 2 tables.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute).

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SOKOLOV, G. A.

ДЕГАЗАЦИЯ СТАЛИ И СПЛАВОВ

М.А.Шмаков П.В.Гельд Ф.А.Садорин	Некоторые особенности процесса рассыпания ферросилиция.
Р.А.Рабин П.В.Гельд	Влияние углерода на водородоустойчивость стали.
Г.Н.Овчинников А.Ю.Попков А.М.Самарин	Особенности распыления стали при излучении вакуумным парометром.
А.М.Самарин М.П.Кузнецов Д.П.Ульянов А.Н.Лутгин	Повышение качества бессемеровской стали методом вакуумной обработки в ванне.
Г.Н.Образец У.А.Смирнов Г.А.Салмин Б.Н.Лапшин В.Н.Козлов	Новые технологические процессы и технологии производства стали с применением перколяции вакуума.
П.И.Артюх Ш.Г.Черкасов	Влияние легирующих на водородное испарение в азоте при плавке его в вакууме.
И.И.Полев Э.И.Серебровский	Влияние гравитационных факторов вакуумной плавки на легирование и структуру ионного спаривания газами в центробежных спаривателях с перегородками стали.
Т.М.Воробьев Н.Г.Лебедев Е.С.Каланин	Влияние вакуумирования при плавке стали на качество стали во времени
	стали ЗМКГСН.

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report submitted for the 5th Physical Chemical
Conference on Steel Production, Moscow-- 30 Jun 1959.

SOKOLOV, G. A., Candidate Tech Sci (diss) -- "Degasification and reduction in the vacuum treatment of unkilled alloyed steel". Moscow, 1959. 18 pp (Min Higher Educ, Moscow Order of Labor Red Banner Inst of Steel im I. V. Stalin), 120 copies (KL, № 24, 1959, 141)

SOV/148-59-1-6/19

13(3)

AUTHORS: Sokolov, G.A., Engineer and Oyks, G.N., Professor, Doctor of Technical Sciences

TITLE: Kinetics of Vacuum-Flow Steel Degassing in a Ladle (Kinetika protsessov degazatsii pri vakuumirovani zhidkoy stali v kovshe)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Chernaya metallurgiya, 1959, Nr 1, pp 47-58 (USSR)

ABSTRACT: Information is given on experiments carried out in order to investigate processes of liquid steel degassing under vacuum. Smelts of "ShKh9", "ShKh15", and "30KhGSNA" grades of electric steel were investigated according to a new technology developed by I.I. Ansheles, Candidate of Technical Sciences from MIS, V.I. Danilin, and B.Z. Kononov, Engineers from the "Krasnyy Oktyabr" Plant. Desulfurization by slag deoxidation was used to obtain steel containing only chromium, carbon, and manganese. The subsequent deoxidation of this steel under vacuum was carried out by carbon dissolving and by degassing. The quantitative evaluation of degassing kinetics was performed by a new indicator method with the use of an indicator gas containing 96 to 98% methane and 1.5 to 3.0% higher hydrocar-

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Kinetics of Vacuum-Flow Steel Degassing in a Ladle

SOV/148-59-1-6/19

bons. An installation used to introduce the indicator gas into the vacuum system is shown in Figure 1. Simultaneously with the investigation of degassing by the indicator method, the gas content in smeltings was determined by conventional methods. The oxygen quantity was found by analyses of "pencil" specimens (karandashnyye proby) with the use of vacuum heating and the nitrogen content was determined by chemical means. Results of analyses are given in tables. It was proved that the most intensive liberation of gas took place during the first 3 to 4 minutes of the process, when 85% from the entire gas quantity (110 to 180 l/t) were liberated. This phenomenon was caused by the bubbling of steel near the ladle walls. It was stated that during the bubbling of steel under vacuum, convective flows were forming inside the ladle, stirring the metal and speeding up the degassing process. The author presents graphs representing the gas-liberation process for various steel grades.

Card 2/3

SOV/180-59-2-1/34

AUTHORS: Gul'tyay, I.I., Zhilo, N.L., Rudneva, A.V., Sokolov, G.A.
and Tsylev, L.M. (Moscow)

TITLE: Influence of Potassium Oxide on the Viscosity of Melts of
the System Lime-Alumina-Silica in the Range Corresponding
to the Compositions of Primary Blast-Furnace Slags
(Vliyaniye okisi kaliya na vyazkost' rasplavov sistemy
izvest'-glinozem-kremnezem v oblasti, sootvetstvuyushchey
sostavam pervichnykh domennykh shlakov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh
Nauk, Metallurgiya i Toplivo, 1959, Nr 2, pp 3-7 (USSR)

ABSTRACT: Analyses of real blast-furnace primary slags (Ref 1) show
an appreciable alkali content. The effect of alkalies on
the physical properties of slags with 0.5 and 10% alumina
has been described by some of the authors (Refs 1,2);
the present work relates to melts with about 16% alumina.
The experimental method used was as previously described
(Refs 2,3), the apparatus (Ref 4) being slightly modified
to increase thermocouple-sheath life. The range of
compositions covered was: 10.8 - 43.7% CaO; 34.1 -
55.8% SiO₂; 15.0 - 17.5% Al₂O₃; 0.0 - 23.2% K₂O;

Card 1/3 0.21 - 1.35 CaO/SiO₂. Table 1 shows the compositions

SOV/180-59-2-1/34

Influence of Potassium Oxide on the Viscosity of Melts of the System
Lime-Alumina-Silica in the Range Corresponding to the Compositions
of Primary Blast-Furnace Slags

and viscosities at 1300, 1350, 1400, 1450 and 1500 °C and
the temperatures at the start of crystallization and at
a viscosity value of 60 poise. Fig 1 shows lines of
equal compositions for different values of viscosity,
16% Al₂O₃ and 1450 °C. Fig 2 shows isotherms for the
start of crystallization for 16% Al₂O₃ slags. The
viscosity and temperature of the start of crystallization
are shown in Figs 3 and 4, respectively, as functions of
the lime : silica ratio for various K₂O contents. The
results show that the introduction of K₂O into the slags
produces an increase in viscosity and crystallization
temperature, the effect being most marked with slags
having high lime : silica ratios. Addition of K₂O also
reduces the range of the most fluid compositions, while
the slag-viscosity minimum rises from 8 to 13 poise.
The authors have estimated the mineralogical compositions
of their slags (Table 2). Slags with minimal viscosity
at 1450°C are characterized by the predominance of

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SOV/180-59-2-1/3¹⁴

Influence of Potassium Oxide on the Viscosity of Melts of the System
Lime-Alumina-Silica in the Range Corresponding to the Compositions
of Primary Blast-Furnace Slags

pseudo-wollastonite and gehlenite. With acid slag,
increasing viscosity is due to formation of anorthite
and free silica; with basic slags to formation of
larnite.

Card 3/3 There are 4 figures, 2 tables and 9 references, 5 of which
are Soviet and 4 English.

SUBMITTED: June 6, 1958

SOV/180-59-3-4/43

AUTHORS: Gul'tyay, I.I., Zhilo, N.L., Sokolov, G.A. and
Tsylev, L.M. (Moscow)

TITLE: The Influence of Magnesia on the Physical Properties
of Blast Furnace Slags

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Metallurgiya i toplive, 1959, Nr 3, pp 20-24 (USSR)

ABSTRACT: Some results of an investigation of the influence of
magnesia on the viscosity and crystallisation
temperature of blast furnace slags are given. The
investigation was carried out in order to obtain an
optimum composition of blast furnace slags possessing
a minimum viscosity and maximum desulphurising power,
applicable to the operating conditions of the
Magnitogorsk Works. The viscosity of slags of the
system CaO - MgO - 15% Al₂O₃ - SiO₂ was studied using
samples of industrial Magnitogorsk slags with additions
of magnesia and, in some cases, of lime and on samples of
synthetic slags made from pure oxides. The viscosity
measurements were carried out in a rotating electro-
viscosimeter designed by the Academy of Sciences of the
USSR (Ref 13) using carbon crucibles at temperatures

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SOV/180-59-3-4/43

The Influence of Magnesia on the Physical Properties of Blast Furnace Slags

of 1400, 1450, 1500 and 1550°C. The experimental results are assembled in table 1. The results obtained indicated the range of compositions of slags of the quaternary system CaO-MgO-Al₂O₃-SiO₂ with a minimum viscosity: CaO from 27.5 to 44%; SiO₂ from 40 to 29.5%; MgO from 5 to 20% and Al₂O₃ ~ 15%. The ratio of CaO/SiO₂ in these slags varies from 0.80 to 1.30 and the ratio of (CaO + MgO)/(SiO₂ + Al₂O₃) from 0.82 to 1.30. In order to explain the influence of magnesia on the mechanism of the viscous flow of slags, calculations of the activation energy E_A were carried out for slags with minimum viscosity. The activation energy varies from 26.7 to 47.5 k cal/mol, whereupon the minimum value was possessed by a slag with a CaO/SiO₂ ratio of 1.01 and a (CaO + MgO)/(SiO₂ + Al₂O₃) ratio of 1.15 (Fig 4). There are 4 figures, 1 table and 13 references, 7 of which are Soviet and 6 English.

SUBMITTED: September 17, 1957

Card 2/2

SOKOLOV, G.A.

Communication workers of the Nizhniy Tagil Metallurgical
Combine. Avtom., telem.i sviaz 3 no.9:28-29 S '59.
(MIRA 13:2)

1. Zamestitel' nachal'nika sluzhby signalizatsii i svyazi
zheleznodorozhnogo tsekha Nizhne-Tagil'skogo metallurgiche-
skogo kombinata.
(Nizhniy Tagil--Railroads, Industrial)

Sokolov, G. N.

PAGE 1 BOOK EXPIRATION

307/4248

Akademija nauk SSSR. Komisija po metallo-khimicheskim obozrenijam proizvodstva stali

Priyemnye vremenja v metalurgii (Uzev o Vremia v Metalurgii) Moscow, Izd-vo

z SSSR, 1960. 374 p. Kriticheskij listok inzerted. 4,500 copies printed.

Sponsoring Agency: Akademija nauk SSSR, Institut metallicheskogo i obozreniya stali.

Komissija po metallo-khimicheskim obozrenijam proizvodstva stali.

Prof.-Rit. A.M. Semenin. Corresponding Member, Academy of Sciences USSR; Ed. of

Publication House, O.M. Makovskij Tech. Ed.; S.G. Markovich.

PURPOSE: This collection of articles is intended for technical personnel interested in recent studies and developments of vacuum steelmaking practice and equipment.

CONTENTS: The book contains information on steel melting in vacuum induction furnaces, and vacuum arc furnaces, vacuum processes in vacuum and degassing of steel, and alloys. The functioning of apparatus and equipment, especially vacuum furnaces and vacuum devices for use in connection with each other, are mentioned in connection with some of the articles. Personalities are also numbered. Personnel are mentioned in connection with some of the articles and will appear in the Table of Contents. Three articles have been translated from English. Some of the articles have been translated from English. Some of the articles have been translated from English. Some of the articles have been translated from English. Some of the articles have been translated from English.

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